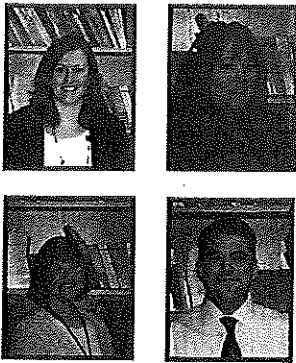


Project K - Early Intervention for At-Risk Kindergarten Students

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Early literacy skills in letter identification, the alphabetic principle, phonological awareness and the processes of rapid automatized naming and orthography are essential in the development of effective reading skills. Interventions that focus on phonological awareness and phonics early in a child's school experience have been found to be more effective and less time consuming than reading remediation for older children (Torgesen, 2001). If remediation is provided early enough, 82% of the at-risk students can become successful readers, yet if delayed until third through fifth grade, the percentage of successful remediation drops to 46%, and in later grades the percentages are even lower, ranging from 10% to 15% (Foorman, Francis, Shaywitz, Shaywitz and Fletcher, 1997). Early intervention not only assists students in developing to their full potential, but also eliminates the negative effects that reading difficulties create, such as poor vocabulary development, lack of content knowledge and poor reading fluency, while also requiring fewer school resources. Providing programming for at-risk kindergarten students may be the best opportunity to prevent low reading achievement or reading disabilities.

Project K was developed at South Elementary School in the Perkiomen Valley School District to prevent reading problems early in students' educational lives. Based on a review of Instructional Support, Title One and Curriculum-Based reading data, we determined that kindergarten students who entered with deficits continued to struggle in subsequent grades and we struggled with how to identify these students earlier. We decided that we were no longer going to wait for students to fail, we were going to do our best to identify those students at-risk for failure and provide them with a program that could support their reading development at the earliest possible moment: kindergarten.

To identify those kindergarten students who were at-risk for failure we chose to use the Dynamic Indicator of Basic Early Literacy Skills (DIBELS) assessment. We chose this measure because it allowed us to clearly identify students who are at-risk for reading difficulties, to monitor the progress of students throughout the course of the year, and throughout their progress to measure the effectiveness of our intervention, Project K. Studies by the National Reading Panel (2000) and the National Research Council (1998) have demonstrated that the DIBELS assesses the areas of early literacy that are necessary for the development of young readers.

For our purposes, the DIBELS has proven to be a quick and efficient general screener which we can use in a mass assessment format up to four times a year. The DIBELS has concurrent criterion-related validity with other individualized standardized measures and curriculum based measures (Elliott, et.al,

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2001). Elliott, Huai & Roach (2007) found the DIBELS to successfully identify at-risk reading students. Finally, its predictive validity (Rouse & Fantuzzo, 2006) allows us to determine which students will be best served by participating in the Project K program.

In order to select students for Project K, all kindergarten students were screened using the DIBELS three times per year and then ranked based on their risk levels on each of the benchmark tests. The lowest 24 students were selected based on the following criteria:

1. *At-risk* by lowest score on more than one benchmark test
2. *At-risk* by lowest score on one benchmark
3. *Some risk* by lowest score on more than one benchmark test
4. *Some risk* by lowest score on one benchmark test

Students began receiving services, were progress-monitored at the midpoint between two DIBELS administrations and were exited from the intervention if all benchmarks were on trajectory. This process was repeated between the winter and spring DIBELS assessments.

Project K provides one-on-one instruction on pre-reading skills that the DIBELS assessment identifies as below the established benchmark. This instruction occurs two times a week for 15 minutes each session to ensure a high amount of time on task. What makes Project K unique is that it is an exceptionally low cost intervention supported by volunteer tutors and everyday materials, many of which have been made by hand.

Volunteers dedicate one hour of service, twice a week. Prior to beginning this service they are screened and trained by the building reading specialist. Each tutor is assigned four students with whom they work twice a week for 15 minutes. This personalized instruction takes place in designated spaces throughout the building. As they work through the variety of activities with the students, tutors keep records of student success on

each skill set. These records, along with student performance on subsequent DIBELS assessments, help to inform staff decisions regarding student progress and alterations that may be needed in the programming.

The teaching activities of Project K were developed by the building reading specialist to address the areas of literacy necessary for future reading success. The program was designed to be engaging to the student, therefore, the tasks were designed to be game-like and most were hands-on and interactive. The activities for each corresponding category of the DIBELS subtests began with more basic skills and ended with more complex skills. Instructors introduced the easier tasks first and, as progress was made, moved on to more advanced skills.

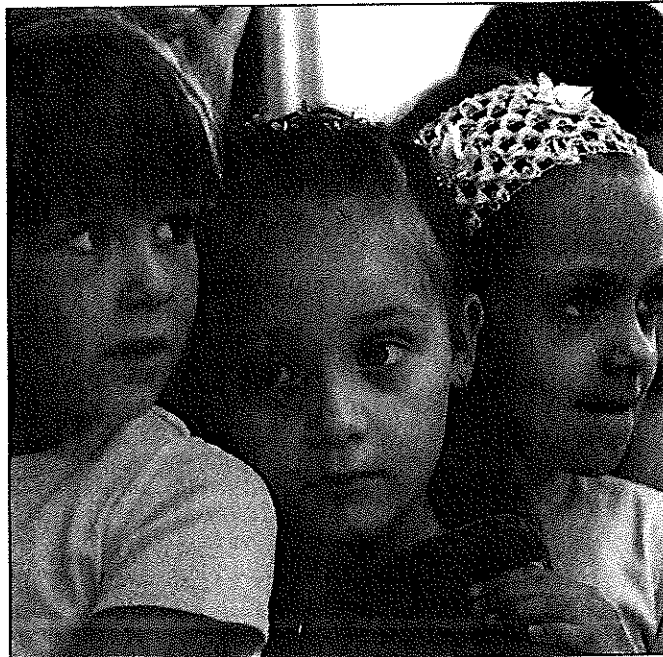
Initial sound fluency activities focused on the beginning sounds of words and included sorting objects by beginning sound, and providing the initial sound of the objects presented. The materials included an oversized alphabet book, foam picture puzzles, phonic sorting strips and photo noun cards.

The activities for letter naming fluency practiced recognizing, naming and writing both the upper and

lower cases of the alphabet as well as ABC order with speed of identification stressed. Specific names of tasks within this category included Sandbox Writing, Magna Doodle, Foam Alphabet Puzzle and Alphabet Flashcards.

Phoneme segmentation activities focused on segmenting words or names of pictured objects into their three or four individual phonemes with activities called Pushing Pennies, Word Building Puzzles, Picture Cards and Spoken Words. Lastly, the non-sense word fluency activities included Foundations

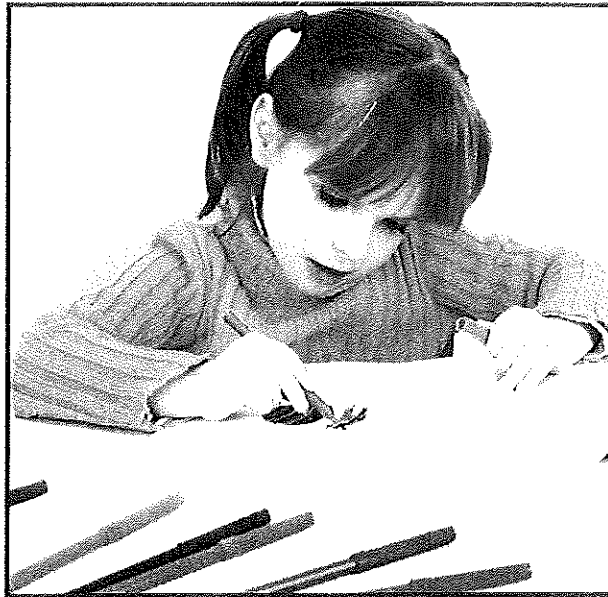
Key Cards, Foam Alphabet Puzzle, Two-part Picture Puzzle, Alphabet Flashcards, Cookie Sheet and Let's Spell. These tasks focused on the linking of individual sound(s) to the corresponding letter, the alphabetic principle with a later emphasis on decoding or creating real and nonsense words.



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Project K appears to be an effective intervention for kindergarten students identified as at-risk or some risk in the areas of phonemic awareness, letter identification and the alphabetic principle. The overall results of Project K are very promising and significant effects were seen in all intervention groups. Over two years, 40 students received the intervention in the fall, 56 students in the winter and 24 students received interventions in both the fall and the winter. Students receiving interventions throughout the year typically entered kindergarten with little or no sound or letter knowledge.

Project K students were significantly below the mean score of students in the district on all subtests of the DIBELS prior to intervention and all groups made significant progress throughout the year. Project K students who received the fall only or winter only intervention, no longer showed weaknesses which were significantly different than the district's mean following the intervention. Three out of the four groups performed above benchmark criteria in initial sound fluency, letter naming fluency and nonsense word



fluency. When the intervention was removed, Project K students who received the fall intervention only were able to maintain levels above benchmark in all three end-of-year subtests and out-performed the district mean in two end-of-the-year subtests.

The neediest students received both the fall and winter interventions. This group made significant progress, but required more time in the intervention program and made slower progress towards the benchmark goals. By the

end of the year benchmark, these students performed above the benchmark in nonsense word fluency and just below the low-risk benchmark for letter naming fluency and phoneme segmentation. These students were able to perform comparably to the district mean in two of the three end-of-year subtests.

Project K has proven to be a cost effective, early intervention program that supports kindergarten students as they build the foundation to become strong and effective readers.

Further inquiries or questions about the Project K program should be directed to Michelle Cinciripino at mcinciripino@pvvsd.org.

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